

In the Claims:

Please amend the claims as follows:

1-56 (cancelled)

57. (new) A method for the preparation of doped oxide material from a first reactant and a second reactant, said first reactant comprising silicon, and the second reactant comprising a rare earth metal, the method comprising:

bringing said first reactant and said second reactant into a gas phase by heating said first reactant and said second reactant;

mixing said first reactant and said second reactant together to create a gas flow; and

mixing said gas flow with at least one oxidant gas to form particles by oxidizing silicon and said rare earth metal, and by condensing oxide vapors formed by said oxidizing, so that said oxide vapors reach a supersaturated state substantially simultaneously, wherein said particles are formed such that there is no time to reach a chemical phase equilibrium, and all substances present in said gas flow are substantially in the gas phase prior to said oxidizing, wherein one or more jets of said at least one oxidant gas are directed to said gas flow, and wherein said one or more jets of said at least one oxidant gas are transverse with respect to said gas flow.

58. (new) The method according to claim 57, wherein said second reactant is in a liquid solution prior to said heating.

59. (new) The method according to claim 57, wherein said rare earth metal is selected from a group consisting of erbium and neodymium.

60. (new) The method according to claim 57, wherein said first reactant comprises a compound selected from a group consisting of silicon tetrachloride and tetraethylortosilicate.

61. (new) The method according to claim 60, wherein said particles comprise an element selected from a group consisting of aluminium, phosphorus, boron, and fluorine.

62. (new) A method for the preparation of doped oxide material from a first reactant and a second reactant, said first reactant comprising germanium, and the second reactant comprising a rare earth metal, the method comprising:

bringing said reactants into a gas phase by heating said reactants;

mixing said reactants together to create a gas flow; and

mixing said gas flow with at least one oxidant gas to form particles by oxidizing germanium and said rare earth metal, and by condensing oxide vapors formed by said oxidizing, so that said oxide vapors reach a supersaturated state substantially simultaneously, wherein said particles are formed such that there is no time to reach a chemical phase equilibrium, and all substances present in said gas flow are substantially in the gas phase prior to said oxidizing, wherein one or more jets of said at least one oxidant gas are directed to said gas flow, and wherein said one or more jets of said at least one oxidant gas are transverse with respect to said gas flow.

63. (new) The method according to claim 62, wherein said first reactant comprises a compound selected from a group consisting of germanium tetrachloride and tetraethoxygermanium.

64. (new) A method for the preparation of doped oxide material from a first reactant and a second reactant, said first reactant comprising silicon, and the second reactant comprising a rare earth metal, the method comprising:

bringing said first reactant and said second reactant into a gas phase by heating said first reactant and said second reactant;

mixing said first reactant and said second reactant together to create a gas flow, wherein the gas flow is directed through a de Laval nozzle; and

mixing said gas flow with at least one oxidant gas to form particles by oxidizing silicon and said rare earth metal, and by condensing oxide vapors formed by said oxidizing, so that said oxide vapors reach a supersaturated state substantially simultaneously, wherein said particles are formed such that there is no time to reach a chemical phase equilibrium, and wherein all substances present in said gas flow are substantially in the gas phase prior to said oxidizing.

65. (new) The method according to claim 64, wherein one or more jets of the at least one oxidant gas are directed to the gas flow in a narrowest part of the de Laval nozzle.

66. (new) A method for the preparation of doped oxide material from a first reactant and a second reactant, said first reactant comprising germanium, and the second reactant comprising a rare earth metal, the method comprising:

bringing said reactants into a gas phase by heating said reactants;
mixing said reactants together to create a gas flow, wherein the gas flow is directed through a de Laval nozzle; and
mixing said gas flow with at least one oxidant gas to form particles by oxidizing germanium and said rare earth metal, and by condensing oxide vapors formed by said oxidizing, so that said oxide vapors reach a supersaturated state substantially simultaneously, wherein said particles are formed such that there is no time to reach a chemical phase equilibrium, and wherein all substances present in said gas flow are substantially in the gas phase prior to said oxidizing.

67. (new) The method according to claim 66, wherein one or more jets of the at least one oxidant gas are directed to the gas flow in a narrowest part of the de Laval nozzle.